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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,014	11/17/2003	Masataka Shinoda	245426US6	9739
22850 7590 11/21/2007 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER NGUYEN, LINH THI	
			ART UNIT 2627	PAPER NUMBER
			NOTIFICATION DATE 11/21/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/713,014	<b>Applicant(s)</b> SHINODA, MASATAKA	
	<b>Examiner</b> Linh T. Nguyen	<b>Art Unit</b> 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 9/13/07.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4, 6-8, 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 4 and 8 recites the limitation "the uppermost portion" and "the lowermost portion" in the above claims. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Objections***

Claims 1, 3, 4 and 8 are objected to because of the following informalities: the claims recited "the lens" which should be changed to "the optical lens." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 6-8, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshi (JP Publication number 11273126) in view of Nuss (US

Patent number 5789750), and further in view of Pakdaman et al (US Patent number 6594086).

In regards to claim 1, Takeshi discloses an optical lens comprising: an optical material comprising a SiC (Paragraph [0007], lines 5-6). Takeshi does not but Nuss discloses an optical lens made of silicon with a cubic crystal structure (Column 5, lines 49-54). However, Takeshi and Nuss do not disclose an optical lens comprising a conical objective surface; and a convex spherical surface formed opposite said conical objective surface, wherein the center of the uppermost portion of the lens does not extent beyond a radius of the convex spherical surface from the center of the lowermost portion of the lens.

In the same field of endeavor, Pakdaman et al discloses an optical lens comprising a conical objective surface (Fig. 1a); and a convex spherical surface formed opposite said conical objective surface (Fig. 1a, element 115), wherein the center of the uppermost portion of the lens does not extent beyond a radius of the convex spherical surface from the center of the lowermost portion of the lens (Fig. 1a and Column 3, lines 60-66; if the hemispherical is ground off by the broken lines then, the lens from the convex to the flat area is equal to the radius). At the time of the invention it would have been obvious to a person of ordinary skill in the art to produce lenses from SiC of Takeshi with a structure of cubic crystal as taught by Nuss with a conical shape structure suggested by Pakdaman et al. The motivation for doing so would have been to provide silicon lens with especially preferred cubic crystal structure for ease of cutting

and further allow for mounting but does not affect the optical properties (Column 3, lines 66-67).

In regards to claim 3, Takeshi discloses a condenser lens comprising a first optical lens (Fig. 1 element 16) and a second optical lens (Fig. 1, element 15) arranged in this order from an objective surface so that the optical axes of said first and second optical lenses are in line with each other (Fig. 1, elements 15 and 16 are in line); wherein at least said first optical lens is formed from an SiC (Paragraph [0007], lines 5-6). Takeshi does not but Nuss discloses an optical lens made of silicon with a cubic crystal structure (Column 5, lines 49-54). Takeshi and Nuss do not but Pakdaman et al discloses wherein said first optical lens further comprises a conical objective surface and a convex spherical surface formed opposite said conical objective surface (Fig. 5A-B), wherein the center of the uppermost portion of the lens does not extend beyond a radius of the convex spherical surface from the center of the lowermost portion of the lens (Fig. 1a and Column 3, lines 60-66). The motivation is the same as claim 1 above.

In regards to claim 4, Takeshi discloses an optical pickup comprising a light source and a condenser lens for converging light emitted from said light source to form a beam spot (Paragraph [0008], lines 3-5), said condenser lens comprising a first optical lens (Fig. 1, element 16) and a second optical lens (Fig. 1, element 15) arranged in this order from an objective surface so that the optical axes of said first and second optical lenses are in line with each other (Fig. 1); wherein said first optical lens is formed from an SiC (Paragraph [0007], lines 5-6). Takeshi does not but Nuss discloses an optical lens made of silicon with a cubic crystal structure (Column 5, lines 49-54). Takeshi and

Nuss do not but Pakdaman et al discloses wherein said first optical lens further comprises a conical objective surface and a convex spherical surface formed opposite said conical objective surface (Fig. 5A-B), wherein the center of the uppermost portion of the lens does not extend beyond a radius of the convex spherical surface from the center of the lowermost portion of the lens (Fig. 1a and Column 3, lines 60-66). The motivation is the same as claim 1 above.

In regards to claims 6 and 10, Takeshi discloses an optical pickup and recording/reproducing apparatus, wherein the wavelength of said light emitted from said light source is longer than 564 nm (Paragraph [0008], lines 1-3).

In regards to claims 7 and 11, Takeshi discloses an optical pickup and recording/reproducing apparatus, wherein said light source comprises a semiconductor laser (Paragraph [0016], lines 2-7).

In regards to claim 8, Takeshi discloses an optical recording/reproducing apparatus (Fig. 1) comprising an optical pickup (Fig. 1, element 12) including a light source (Fig. 1, element 10) and a condenser lens for converging light emitted from said light source to form a beam spot (Paragraph [0008], lines 3-5), said condenser lens including a first optical lens (Fig. 1, element 16) and a second optical lens (Fig. 1, element 15) arranged in this order from an objective surface so that the optical axes of said first and second optical lenses are in line with each other (Fig. 1); and control drive means for controllably driving said condenser lens in a focusing direction and/or a tracking direction of an optical recording medium (Fig. 1, element 17); wherein said first optical lens is formed from an SiC (Paragraph [0007], lines 5-6). Takeshi does not but

Nuss discloses an optical lens made of silicon with a cubic crystal structure (Column 5, lines 49-54). Takeshi and Nuss do not but Pakdaman et al discloses wherein said first optical lens further comprises a conical objective surface and a convex spherical surface formed opposite said conical objective surface (Fig. 1a), wherein the center of the uppermost portion of the lens does not extend beyond a radius of the convex spherical surface from the center of the lowermost portion of the lens (Fig. 1a and Column 3, lines 60-66). The motivation is the same as claim 1 above.

In regards to claim 12, Takeshi discloses an optical recording/reproducing apparatus, wherein the light beam of said light emitted from said light source has an optical axis substantially parallel to the principal surface of said optical recording medium (Fig. 1, element 1 optical disk is parallel with element 10, light source).

In regards to claim 13, Takeshi discloses an optical recording/reproducing apparatus, further comprising means for mounting a plurality of optical recording media spaced from each other; the spacing between adjacent ones of said optical recording media being larger than the diameter of the light beam of said light emitted from said light source (Paragraph [0012]).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 3, 4 and 8 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

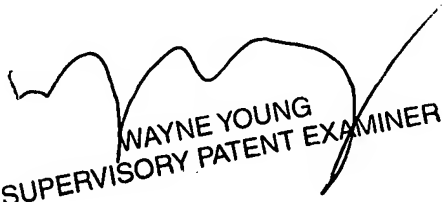


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LN  
November 13, 2007

  
WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER